



NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50-309 and 72-30; NRC-2013-0156]

**Maine Yankee Atomic Power Company; Maine Yankee Atomic Power Plant
Issuance of Environmental Assessment and Finding of No Significant Impact
Regarding an Exemption Request**

AGENCY: Nuclear Regulatory Commission.

ACTION: Issuance of environmental assessment and finding of no significant impact.

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1.0 INTRODUCTION

On November 23, 2011, the U.S. Nuclear Regulatory Commission (NRC) issued a final rule amending certain emergency planning (EP) requirements in the regulations that govern domestic licensing of production and utilization facilities (76 FR 72560; November 23, 2011) (EP Final Rule). The EP Final Rule was effective on December 23, 2011, with various implementation dates for each of the rule changes.

Maine Yankee Atomic Power Company (MYAPC) is holder of Facility Operating License

DPR-36 for the Maine Yankee Atomic Power Plant (MY). The license, issued pursuant to the Atomic Energy Act of 1954, as amended, and part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR), allows MY to possess and store spent nuclear fuel at the permanently shut down and decommissioned facility under the provision of 10 CFR part 72, subpart K, “General License for Storage of Spent Fuel at Power Reactor Sites.” In a letter dated August 7, 1997 (Agencywide Document Access and Management System (ADAMS) Legacy Accession No. 9708140225), MYAPC informed the NRC that the MY facility had permanently ceased power operations and fuel had been removed from the reactor and placed in the fuel pool.

After ceasing operations at the reactor, MYAPC began transferring spent nuclear fuel from the spent fuel pool to the MY independent spent fuel storage installation (ISFSI) for long-term dry storage. These activities were completed in 2004, and final decommissioning of the reactor site was completed in 2005. The MY ISFSI is a vertical dry cask storage facility for spent nuclear fuel. The ISFSI is located on approximately three acres of land that was not released for unrestricted use after completion of decommissioning of the reactor (ADAMS Accession No. ML052380223).

On June 8, 2012, MYAPC submitted a letter, “Request for Exemption to Revised Emergency Planning Regulations” (ADAMS Accession No. ML12172A298¹), requesting exemption from specific EP requirements of 10 CFR 50.47 and Appendix E to 10 CFR part 50 for the MY ISFSI.

MYAPC states that this exemption request and its impact on the corresponding emergency plan: (1) is authorized by law; (2) will not present an undue risk to the public health and safety; and (3) is consistent with the common defense and security in accordance with 10 CFR 50.12. MYAPC states that its intent in submitting this exemption request is to maintain the regulatory structure in place prior to issuance of the EP Final Rule and, therefore, does not propose any changes to the emergency plan or implementing procedures other than simple regulatory reference changes that can be implemented under 10 CFR 50.54(q).

¹ Document contains sensitive security related information and is not publically available.

2.0 DISCUSSION

On August 7, 1997, MYAPC notified the NRC that it had decided to cease operating MY. On November 6, 1997 (ADAMS Legacy Accession No. 9711130334), MYAPC requested an exemption from the provisions of 10 CFR 50.54(q) that required emergency plans to meet all of the standards of 10 CFR 50.47(b) and all of the requirements of Appendix E to 10 CFR part 50 so that the licensee would have to meet only certain EP standards and requirements. Additionally, MYAPC requested approval of a proposed MY Defueled Emergency Plan (DEP) that proposed to meet those limited standards and requirements.

The NRC approved the requested exemption and the DEP on September 3, 1998 (ADAMS Legacy Accession No. 9809140214). The safety evaluation report (SER) established EP requirements for MY as documented in the DEP. The NRC staff concluded that the licensee's emergency plan was acceptable in view of the greatly reduced offsite radiological consequences associated with the decommissioning plant status. The staff found that the postulated dose to the general public from any reasonably conceivable accident would not exceed the U.S. Environmental Protection Agency (EPA) Protective Action Guides (PAGs), and for the bounding accident, the length of time available to respond to a loss of spent fuel cooling or reduction in water level gave confidence that offsite measures for the public could be taken without preparation.

On August 28, 2002 (ADAMS Accession No. ML022550037¹), the DEP was revised under 10 CFR 50.54(q) to include an emergency plan specific to the onsite ISFSI as the licensee commenced moving spent nuclear fuel to the ISFSI. This ISFSI Emergency Plan was included as an Attachment III to the DEP.

According to MYAPC, the power plant buildings have been dismantled and the materials to be removed have been shipped offsite. As part of completing decommissioning, all spent

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nuclear fuel and greater than class C waste was ultimately transferred to the ISFSI in February 2004.

On September 27, 2004 (ADAMS Accession No. ML042790408¹), the DEP was revised under 10 CFR 50.54(q) to reflect that all spent nuclear fuel had been transferred into the ISFSI, the Spent Fuel Pool was drained, and all evolutions that could produce a radiological event serious enough to trigger the declaration of an emergency at the plant have been completed. Therefore, the licensee terminated the DEP but retained the MY ISFSI Emergency Plan. This action eliminated all facets of the emergency plan not related to the ISFSI. The standalone MY ISFSI Emergency Plan reflected the emergency preparedness and response requirements applicable to MYAPC in light of the exemption granted in 1998. The ISFSI Emergency Plan provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the MY ISFSI for the same reasons that the NRC found that the DEP met the applicable EP requirements. Since the approval and SER for the original MY DEP, MYAPC has not requested nor received substantive exemptions from emergency planning requirements.

Revision 1 of the MY ISFSI Emergency Plan, February 17, 2011 (ADAMS Accession No. ML110601310¹), reflects the current conditions, where the only thing remaining onsite is the ISFSI and its related support systems, structures, and components.

With the Final EP Rule, several requirements in 10 CFR part 50 were modified or added, including changes in Section 50.47, Section 50.54, and Appendix E. Specific implementation dates were provided for each EP rule change. The Final EP Rule codified certain voluntary protective measures contained in NRC Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-Based Events," and generically applicable requirements similar to those previously imposed by NRC Order EA-02-026, "Order for Interim Safeguards and Security Compensatory Measures," dated February 25, 2002.

¹ Document contains sensitive security related information and is not publically available.

In addition, the EP Final Rule amended other licensee emergency plan requirements to: (1) enhance the ability of licensees in preparing for and in taking certain protective actions in the event of a radiological emergency; (2) address, in part, security issues identified after the terrorist events of September 11, 2001; (3) clarify regulations to effect consistent emergency plan implementation among licensees; and (4) modify certain EP requirements to be more effective and efficient. However, the EP Final Rule was only an enhancement to the NRC's regulations and was not necessary for adequate protection. On page 72563 of the *Federal Register* notice for the EP Final Rule, the Commission "determined that the existing regulatory structure ensures adequate protection of public health and safety and common defense and security."

3.0 REGULATORY EVALUATION

In the Final Rule for Storage of Spent Fuel in NRC-Approved Storage Casks at Power Reactor Sites (55 FR 29181; July 18, 1990), the NRC amended its regulations to provide for the storage of spent nuclear fuel under a general license on the site of any nuclear power reactor. In its Statement of Considerations (SOC) for the Final Rule (55 FR 29185), the Commission responded to comments related to emergency preparedness for spent fuel dry storage, stating, "The new 10 CFR 72.32(c) ... states that, 'For an ISFSI that is located on the site of a nuclear power reactor licensed for operation by the Commission, the emergency plan required by 10 CFR 50.47 shall be deemed to satisfy the requirements of this section.' One condition of the general license is that the reactor licensee must review the reactor emergency plan and modify it as necessary to cover dry cask storage and related activities. If the emergency plan is in compliance with 10 CFR 50.47, then it is in compliance with the Commission's regulations with respect to dry cask storage."

In the SOC for the Final Rule for EP requirements for ISFSIs and Monitored Retrievable Storage Installation (MRS) (60 FR 32430; June 22, 1995), the Commission stated, in part, that “current reactor emergency plans cover all at- or near-reactor ISFSI's. An ISFSI that is to be licensed for a stand-alone operation will need an emergency plan established in accordance with the requirements in this rulemaking” (60 FR 32431). The Commission responded to comments (60 FR 32435) concerning offsite emergency planning for ISFSIs or an MRS and concluded that “the offsite consequences of potential accidents at an ISFSI or a MRS would not warrant establishing Emergency Planning Zones.”

As part of the review for MYAPC's current exemption request, the staff also used the EP regulations in 10 CFR 72.32 and Spent Fuel Project Office Interim Staff Guidance (ISG) – 16, “Emergency Planning,” (ADAMS Accession No. ML003724570) as references to ensure consistency between specific-licensed and general-licensed ISFSIs.

4.0 TECHNICAL EVALUATION

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR part 50 when: (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security; and (2) when special circumstances are present. The staff reviewed this request to determine whether the specific exemptions should be granted, and the safety evaluation (SE) is provided in its letter to MYAPC, dated May 2, 2013 (ADAMS Accession No. ML13112A842). After evaluating the exemption requests, the staff determined MYAPC should be granted the exemptions detailed in the SE.

The NRC has found that MYAPC meets the criteria for an exemption in § 50.12. The Atomic Energy Act of 1954, as amended, and the Commission's regulations permit the

Commission to grant exemptions from the regulations in 10 CFR part 50. Granting exemptions is consistent with the authority provided to the Commission in the Atomic Energy Act of 1954, as amended. Therefore, the exemption is authorized by law.

As noted in Section 2.0, "Discussion" above, MYAPC's compliance with the EP requirements in effect before the effective date of the EP Final Rule demonstrated reasonable assurance of adequate protection of the public health and safety and common defense and security. In its SE, the NRC staff explains that MYAPC's implementation of its ISFSI emergency plan, with the exemptions, will continue to provide this reasonable assurance of adequate protection. Thus, granting the exemptions will not present an undue risk to public health or safety and is not inconsistent with the common defense and security.

For the Commission to grant an exemption, special circumstances must exist. Under § 50.12(a)(2)(ii), special circumstances are present when "[a]pplication of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule." These special circumstances exist here. The NRC has determined that MYAPC's compliance with the regulations described in its SE is not necessary for the licensee to demonstrate that, under its emergency plan, there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Consequently, special circumstances are present because requiring MYAPC to comply with the regulations that the staff describes in its SE is not necessary to achieve the underlying purpose of the EP regulations.

5.0 ENVIRONMENTAL ASSESSMENT (EA)

Identification of Proposed Action:

By letter dated June 8, 2012, MYAPC submitted an exemption request in accordance with 10 CFR 50.12 from specific EP requirements of 10 CFR 50.47 and Appendix E to 10 CFR

part 50 for MY. Specifically, the exemption would eliminate unnecessary requirements associated with offsite consequences, protective actions, hostile action and emergency facilities due to the current status of MY.

Need for the Proposed Action:

In accordance with 10 CFR 50.82, the 10 CFR part 50 licensed area for MY has been reduced to a small area surrounding the ISFSI. In this condition, MY poses a significantly reduced risk to public health and safety from design basis accidents or credible beyond design basis accidents since these cannot result in radioactive releases which exceed EPA PAGS at the site boundary. Because of this reduced risk, compliance with all the requirements in 10 CFR 50.47 and 10 CFR part 50, Appendix E is not appropriate. The requested exemption from portions of 10 CFR 50.47 and 10 CFR part 50, Appendix E is needed to continue implementation of the MY ISFSI emergency plan that is appropriate for a stand-alone ISFSI and is commensurate with the reduced risk posed by the facility. The requested exemption will allow spent fuel to continue to be stored safely without imposing burdensome and costly new requirements that provide no increased safety benefit.

Environmental Impacts of the Proposed Action:

The NRC has determined that, given the continued implementation of the MY ISFSI emergency plan, with the exemptions noted in its SE, no credible events would result in doses to the public beyond the owner controlled area boundary that would exceed the EPA PAGs. Additionally, the staff has concluded that the MY ISFSI emergency plan, with the exemptions described in its SE, provides for an acceptable level of emergency preparedness at the MYAPC facility in its shutdown and defueled condition, and also provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the MYAPC facility. Based on these findings, the NRC concludes that there are no radiological

environmental impacts due to granting the approval of the exemptions, the proposed action will not increase the probability or consequences of accidents, no changes are being made in the types or quantities of effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action. The proposed action does not affect non-radiological plant effluents and has no other environmental impact. Therefore, there are no significant non-radiological impacts associated with the proposed action. Based on the assessment above, the proposed action will not have a significant effect on the quality of the human environment.

Alternative to the Proposed Action:

Since there is no significant environmental impact associated with the proposed action, any alternatives with equal or greater environmental impact are not evaluated. The alternative to the proposed action would be to deny approval of the exemption. This alternative would have the same environmental impact.

FINDING OF NO SIGNIFICANT IMPACT

The environmental impacts of the proposed action have been reviewed in accordance with the requirements set forth in 10 CFR part 51. Based upon the EA, the Commission finds that the proposed action of granting an exemption will not significantly impact the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed exemption.

6.0 CONCLUSION

The NRC concludes that the licensee's request for an exemption from certain requirements of 10 CFR 50.47(b) and 10 CFR part 50, Appendix E, Section IV as specified in the SE are acceptable in view of the greatly reduced offsite radiological consequences associated with the ISFSI.

The exemption request has been reviewed against the acceptance criteria included in 10 CFR 50.47, Appendix E to 10 CFR part 50, 10 CFR 72.32 and Interim Staff Guidance – 16. The review considered the ISFSI and the low likelihood of any credible accident resulting in radiological releases requiring offsite protective measures. These evaluations were supported by the previously documented licensee and staff accident analyses. The staff concludes that: the MY ISFSI Emergency Plan provides: (1) an adequate basis for an acceptable state of emergency preparedness; and (2) the emergency plan, in conjunction with arrangements made with offsite response agencies, provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the MYAPC facility.

The NRC has determined that pursuant to 10 CFR 50.12, the exemptions described in the SE are authorized by law, will not endanger life or property or the common defense and security, and are otherwise in the public interest, and special circumstances are present.

7.0 FURTHER INFORMATION

Documents related to this action, including the application for renewal and supporting documentation, are available online in the NRC library at <http://www.nrc.gov/reading-rm/adams.html>. From this site, you can access the NRC's ADAMS, which provides text and image files of NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737 or by email to pdr.resource@nrc.gov. These documents may also be viewed electronically on the public computers located at the NRC's PDR, O 1 F21, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852. The PDR reproduction contractor will copy documents for a fee.

Dated at Rockville, Maryland, this 28th day of June, 2013.

FOR THE NUCLEAR REGULATORY COMMISSION

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